

WHAT IS CLAIMED IS:

1. A system for location search of a data processing device including a wireless communications unit and a unit to output received radio wave information for location detection, the system comprising:

a unit which acquires the received radio wave information from the data processing device by wireless communications;

10 a location detection unit which calculates position coordinate information to specify a location of the data processing device based on the received radio wave information;

15 a region information database in which region information is stored to designate a spatial range associated with the position coordinate information; and

20 a search unit which searches the region information corresponding to the position coordinate information calculated by the location detection unit from the region information database.

25 2. The system according to claim 1, wherein the region information database stores the region information including space identification information to specify the spatial range associated with the position coordinate information, and

the space identification information includes

a space name allocated to the spatial range, and range identification information which identifies the spatial range set for each position coordinate information and which indicates the same content at a time when
5 a plurality of spatial ranges specified by different position coordinate information are handled as the same spatial range.

10 3. The system according to claim 1, wherein the region information database stores space identification information which specifies the spatial range associated with the position coordinate information, and the region information including control information indicating a predetermined control process for each spatial range.

15 4. The system according to claim 1, wherein the region information database stores the region information including space identification information associated with the position coordinate information to identify the spatial range designated by a plane coordinate of two points in a three-dimensional space and a region in a vertical direction.
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5. The system according to claim 1, further comprising;

25 a computer system which manages the location of the data processing device; and means for transferring the position coordinate information calculated by the location detection unit

and region information searched by the search unit to the computer system.

6. The system according to claim 1, further comprising:

5 a computer system which manages a location of the data processing device; and
 means for transferring the position coordinate information and the region information to the computer system,

10 the computer system including:

 a unit which uses the position coordinate information and the region information to produce display information capable of confirming the location of the data processing device; and

15 a display device which displays the display information on a display.

7. The system according to claim 6, wherein the computer system includes a unit which produces map information to display a map including the location of the data processing device on the display, when the display device displays the display information on the display.

25 8. The system according to claim 1, wherein the region information database stores space identification information specifying the spatial range associated with the position coordinate information and the region information including control information indicating

a predetermined process for each spatial range,

the system further comprising:

a computer system which manages the location of
the data processing device; and

5 means for transferring the position coordinate
information and the region information to the computer
system,

the computer system including:

10 a unit which uses the position coordinate
information and the region information to produce
display information capable of confirming the location
of the data processing device;

a display device which displays the display
information on a display; and

15 a controller which executes a predetermined
process set for each spatial range corresponding to the
location of the data processing device in accordance
with the control information.

9. The system according to claim 8, wherein the
20 controller executes a control so as to prohibit the
display information from being displayed or to change
the display information to a predetermined content,
when the control information indicates the display
prohibition or the change of the display information.

25 10. The system according to claim 1, further
comprising:

a controller which executes a predetermined alarm

process, when control information indicates an alarm.

11. The system according to claim 1, wherein the
region information database stores the region
information including space identification information
5 specifying the spatial range associated with the
position coordinate information,

the space identification information includes:

a space name allocated to the spatial range;
range identification information which
10 identifies the spatial range set for each position
coordinate information and which indicates the same
content, when a plurality of spatial ranges specified
by different position coordinate information are
treated as the same spatial range; and
15 entrance/exit information indicating a
position coordinate of an entrance/exit with respect to
the spatial range.

12. The system according to claim 1, wherein the
region information database stores space identification
20 information specifying the spatial range associated
with the position coordinate information, and the
region information including entrance/exit information
indicating a position coordinate of an entrance/exit
with respect to the spatial range, and

25 the search unit includes movement detection means
for detecting that the data processing device has moved
in different spatial ranges based on the position

coordinate information calculated by the location detection unit, and

ignores the movement by the movement detection means as an error, when searching the region information from the region information database based on the position coordinate information calculated by the location detection unit, and judging that the data processing device has moved in the different spatial ranges through the range other than the entrance/exit indicated by the entrance/exit information.

13. The system according to claim 1, further comprising:

a schedule information management unit which stores schedule information including a use time corresponding to the spatial range, wherein the search unit judges whether or not the position coordinate information is an error based on the schedule information, and corrects the position coordinate information in a case in which the judgment result is the error, when searching the region information from the region information database based on the position coordinate information calculated by the location detection unit.

14. A method of location search of a data processing device including a wireless communications unit and a unit to output received radio wave information for location detection, the method

comprising:

calculating position coordinate information to specify a location of the data processing device based on the received radio wave information acquired from
5 the data processing device by wireless communications; and

referring to a region information database in which region information is stored to designate a spatial range associated with the position coordinate
10 information, and searching the region information corresponding to the position coordinate information from the region information database.

15. A method according to claim 14, further comprising:

transferring the position coordinate information and the region information to a computer system which manages the location of the data processing device.
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16. A method according to claim 15, wherein the region information database stores space identification information to specify the spatial range associated with the position coordinate information, and the region information including control information indicating a predetermined control process for each spatial range, and
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25 the computer system uses the position coordinate information and the region information to display information capable of confirming the location of

the data processing device on a display, and
executes a predetermined process set for each
spatial range corresponding to the location of the data
processing device in accordance with the control
5 information.

17. A method according to claim 14, wherein the
region information database stores space identification
information to specify the spatial range associated
with the position coordinate information, and the
10 region information including entrance/exit information
indicating a position coordinate of an entrance/exit
with respect to the spatial range,

the method further comprising:
detecting that the data processing device has
15 moved in different spatial ranges based on the position
coordinate information; and

ignoring the movement as an error, when searching
the region information from the region information
database based on the position coordinate information
20 and judging that the data processing device has moved
in the different spatial ranges through a range other
than the entrance/exit indicated by the entrance/exit
information.

18. A method according to claim 14, further
25 comprising:

disposing a schedule information management unit
storing schedule information including a use time

corresponding to the spatial range to judge whether or
not the position coordinate information is an error
based on the schedule information; and

correcting the position coordinate information
5 based on the schedule information in a case in which
the judgment result is the error.